In The Specification

Page 1: Title – please amend the title to read as follows:

A1

WOOD SUPPORT PILING WITH COMPOSITE WRAPPING AND METHOD FOR REINFORCING THE SAME

Page 7: Brief Description of the Drawings - please insert the following:

A2

FIG. 3 is a top view of a filament winding apparatus and impregnator in accordance with one embodiment of the present invention; and

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FIG. 4 is a side cross-sectional view of a filament winding apparatus and impregnator in accordance with one embodiment of the present invention.

Pages 9-11 : Detailed Description of the Preferred Embodiments

The reinforced wood support piling 20 is manufactured by a filament winding process as shown in FIGs. 3 and 4. This allows the reinforced wood support piling 20 to be mass-produced economically, and allows substantial control over the manufacturing to improve quality. Thus, this method provides advantages over methods that attempt to repair deteriorated poles while they are in place in the ground. Filament winding is a reinforced plastic process employing a series of continuous, resin-impregnated fibers 42 or strands applied to the rotating elongate shaft 30. The strands 42 may be impregnated with the resin by passing through an impregnator 43, which may consist of a resin bath 44 having rollers 45 and doctor blades 46, to saturate the strands 42 with the resin. The resin-impregnated fibers 42 may be installed in a predetermined geometrical pattern under controlled tension, which then cures to form the composite wrapping 40 with a high strength-to-weight ratio, good corrosion resistance, thermal and impact resistance, and a high strength-

to-thickness ratio. The filaments 42 are preferably composed of fiberglass, however, other materials known to those skilled in the art may be used within the scope of the present invention. Suitable resins include epoxies, polyesters, polyimides, silicones, polyethylenes, and phenolics or any other such resin known to those skilled in the art. The particular resin used may be selected to be suitable for the intended purpose based on various factors such as cost, strength, durability, fire retardation characteristics, or appearance, for example.

Equipment for the filament winding process may resemble the conventional machine shop lathe 50. The elongate shaft 30 may be positioned between the headstock 51 and tailstock 52 and rotated so that tow threads or fibers 42, after being saturated with plastic binding material, may be pulled onto the exterior surface 32 of the shaft 30. A carriage 47dispenses the reinforcement fibers 42 and moves in a direction parallel to the longitudinal axis 48 of the elongate shaft 30. The linear speed of the carriage may be synchronized with the rotational speed of the elongate shaft 30 so that the reinforcement fibers 42 are applied at some predetermined and controlled position and orientation. Preferably, the tow threads or fibers 42 are applied to the wood pole 30 to form windings which form an angle θ as shown in FIG. 1 with respect to the longitudinal axis 48 of the shaft 30 within a range of sixty to ninety degrees (60°-90°). Most preferably, the angle of the windings is approximately eighty degrees (80°). The carriage 47 traverses back and forth for the length of travel required to produce the desired length of the composite wrapping 40, which would extend along part or all of the shaft 30. The number of passes of carriage travel and rotations of the elongate shaft 30 cooperate to establish the amount of composite material deposited onto the elongate shaft 30, and thereby the thickness of the composite wrapping 40.